



Book Review

Chromatography Theory

J. Cazes, R.P.W. Scott; Marcel Dekker, Inc., New York, 2002, x + 496 pages, ISBN 0-8247-0778-8, \$115.00

Chromatography is one of the principal tools for separating and analysing the constituents of a solution, by differentiating between substances in different phases, resulting in elution in a specific order. As such, the various chromatography methods are used widely in many fields of research, as they allow truly differentiated results to be obtained. The concept of chromatography is separation, commonly by gas or by liquid, and also thin layer chromatography. As the technique is widely used, the theory behind chromatography needs to be understood if people are to use it and apply it on a day-to-day basis, allowing them to design, construct and execute effective separation experiments, which are pertinent to their needs.

Chromatography Theory attempts to describe the theory behind chromatography by discussing many different principles in detail. The book is split into two parts, the first part deals with the mechanism of retention, starting with an introduction to the theory of retention, and progressing on through the chapters discussing control, distribution coefficients, mixed-phase theory, finishing the first section by discussing programming and finally further applications. The second part deals with the mechanism of dispersion, discussing practical methods and the theories behind the separation principles, with two chapters devoted to design-

ing columns. The last chapter is a discussion of Thin Layer Chromatography, with reference to the ideas and principles discussed earlier in the book, and also about how this method differs in both ideas and principles from Gas Chromatography and Liquid Chromatography. Each chapter finishes with a brief synopsis of what has been discussed in the chapter, followed by a list of the references used in the chapter.

This book contains a good deal of algebra, which would not be suitable for anyone who is unsure of their mathematics, a knowledge of algebra and statistics is definitely needed to make sense of the more complex theories. The book itself is a useful reference tool for those who need to use chromatography in any of its guises, as the theory and principles behind each method are discussed in detail, as is the practical side of chromatography, as the information for column design is a useful tool. It is also useful for those who merely require background knowledge of the topic, say undergraduates approaching the end of their courses. This book contains the majority of information one may need regarding chromatography theory, from a first-principle level through to applied use.

Michael McCluskie*

John F. Kennedy

*Chembiotech Laboratories,
Institute of Research and Development,
University of Birmingham Research Park,
Birmingham B15 2SQ, UK*

* Corresponding author.